

Application No: 10/612,389

REMARKS

Claims 1-26 are pending. By this Amendment, claim 25 is canceled and claim 23 is amended to include the limitation of claim 25. Claim 23 is also amended to delete the limitation of "the charge transport material comprising only one epoxy group" and to define Y as a phenyl group which is at least trivalent, which is supported by the specification, for example, Compounds (2) and (3) at p. 20, line 14. No new matter is added by this amendment. Claims 23-24 stand rejected. Applicant respectfully requests reconsideration of the pending rejections based on the following comments.

Improper Antecedent Basis Objection

The specification was objected to as failing to provide proper antecedent basis for the claimed subject matter. The Examiner indicated that the recitation "X is a OCH₂ group" in claims 2, 9, and 24 and the recitation "R₁, R₂, R₃, and R₄ are, independently, an aryl group" in claims 3, 10, and 25 lack antecedent basis in the specification. The paragraph at page 4, lines 1-2 in the Summary of the Invention section is amended as follows:

In a fourth aspect, the invention features a charge transport material having the general formula above. In some embodiments of interest, X of the general formula above is a OCH₂ group. In other embodiments of interest, R₁, R₂, R₃, and R₄ are, independently, an aryl group.

The amendment is supported by the original claims 2, 3, 9, 10, 16, 17, 24, and 25 and by the specification, for example, Compound (2) and Compound (3) at page 20, lines 9-10. After the amendment, the specification provides proper antecedent basis for the recitation "X is a OCH₂ group" in claims 2, 9, 16, and 24 and the recitation "R₁, R₂, R₃, and R₄ are, independently, an aryl group" in claims 3, 10, 17, and 25.

In view of the above comments, Applicants respectfully request withdrawal of the objection to the specification.

Application No. 10/612,389

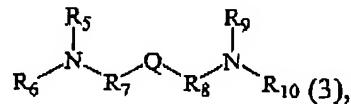
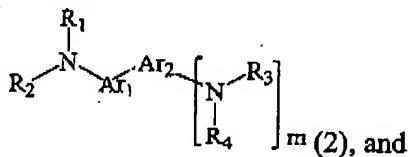
Claim Rejection under 35 U.S.C. § 112

Claims 23-25 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claim 25 is canceled. The Examiner indicated that the specification does not provide support to the limitation of "the charge transport material comprising only one epoxy group" in the previously amended claim 23. Claim 23 is currently amended so that the limitation of "the charge transport material comprising only one epoxy group" is deleted.

In view of the above comments, Applicants respectfully request withdrawal of the rejection of claims 23-24 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

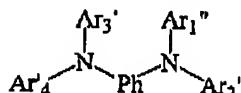
Claim Rejection under 35 U.S.C. § 103

Claims 23-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kikuchi (U.S. Pat. No. 6,416,915). Claim 25 is canceled. Claim 24 depends on claim 23. Kikuchi discloses at col. 3, line 4 to col. 4, line 34 that a hole-transporting compound having Formula (1): $(P^1)_a-A-(Z-(P^2)_d)_b$ wherein P^1 and P^2 independently denote a chain polymerization function group; Z denotes a bonding organic group; a and b and d are independently an integer of at least 0; and A denotes a hole-transporting group which is such that a combination of A with a number $(a+b)$ of hydrogen atoms, instead of $-(P^1)_a$ and $-(Z-(P^2)_d)_b$ as in Formula (1), would provide a hole-transporting compound represented by a formula selected from the group consisting of, *inter alia*, Formulae (2) and (3) as shown below:



where R_1-R_{10} independently denote an alkyl group, aralkyl group or aryl group each capable of having a substituent and Ar_1-Ar_2 denote an arylene group capable of having a substituent; $()$ denotes an organic group; and m is 0 or 1. Kikuchi does not disclose a hole-transporting compound where A has the formula

Application No: 10/612,389



wherein Ar_1 - Ar_4 denote an aryl group and Ph denote a phenylene group capable of having at least a substituent such as a -X-E group.

Claim 23 is amended (1) to include the limitation of claim 25; (2) to delete the limitation of "the charge transport material comprising only one epoxy group;" and (3) to define Y as a phenyl group which is at least trivalent. After the amendment, the cited reference, Kikuchi, does not teach, suggest, or provide an incentive for the modification of the prior art reference to provide all the limitations, particularly the limitations that R_1 , R_2 , R_3 , and R_4 are, independently, an aryl group and that Y is a phenyl group which is at least trivalent. Therefore, the currently amended claim 23 and thus claim 24, which depends on claim 23, are not obvious under 35 U.S.C. § 103(a) over Kikuchi under 35 U.S.C. § 103(a).

Furthermore, the Examiner asserted that it would have been obvious for a person skill in the art, in view of the teachings of Kikuchi, to substitute one of the polymerization functional groups $-\text{O}-\text{C}(\text{O})-\text{CH}=\text{CH}_2$ in the Kikuchi compound 27 with the equivalent chain



polymerization functional groups $-\text{OCH}_2-\text{CH}=\text{CH}_2\text{CH}_2$. The Examiner further asserted that the resulting compound after the substitution meets the compositional limitations of the formula



recited in claims 23-25. Applicants respectfully submit that $-\text{CH}=\text{CH}_2\text{CH}_2$ is a four-membered oxetanyl group and not a three-membered epoxy group. Therefore, the above-mentioned resulting compound after the substitution does not meet the compositional limitations of the formula recited in instant claims 23-24.

In view of the above comments, Applicants respectfully request withdrawal of the rejection to claims 23-24 under 35 U.S.C. § 103(a) as being unpatentable over Kikuchi (U.S. Pat. No. 6,416,915).

Application No: 10/692,389

Claim Rejection under 35 U.S.C. § 102(b)

A) Claims 23-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by Itoh, T., et al., "Synthesis and Polymerization of 1-(2,4,6-Tricyanophenylthio)-3-[3,5-bis(N,N-dimethylamino)phenoxy]-2-propyl Methacrylate; Polymer Effect on Intramolecular Charge-Transfer Interaction," Journal of Polymer Science: Part A: Polymer Chemistry (1995), Vol. 33, pp. 1475-1485 (Itoh). Claim 23 is amended to include the limitation of claim 25. After the amendment, claim 23 and thus claim 24, which depends on claim 23, are not anticipated by Itoh.

In view of the above comments, Applicants respectfully request withdrawal of the rejection to claims 23 and 24 under 35 U.S.C. § 102(b) as being anticipated by anticipated by Itoh.

B) Claims 23-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. 5,364,614 (Platzek). Claim 23 is amended to include the limitation of claim 25. After the amendment, claim 23 and thus claim 24, which depends on claim 23, are not anticipated by Platzek.

In view of the above comments, Applicants respectfully request withdrawal of the rejection to claims 23 and 24 under 35 U.S.C. § 102(b) as being anticipated by U.S. 5,364,614 (Platzek).

Allowable Subject Matter

Claims 1-22 were indicated allowable over the prior art of record.

Claim 26 was indicated allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Claim 26 depends on claim 23. Claim 23 is amended such that it is allowable for the reason mentioned above. After the amendment of claim 23, the currently amended claim 26 is allowable in its dependent form.

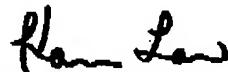
Application No: 10/652,389

CONCLUSION

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



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